Sheet 1 of 6												
FORM PTO 1449 (		MENT OF COMME		ATTY DOCKET 2000_1327	NO.		SERIAL NEW					
PATE	NT AND	MENT OF COMMER TRADEMARK OFFI SES CITED BY APPLICA	CE	APPLICANT Mitsuaki OS	HIMA et al.							
(Us	se severa	sheets if necessary) PTO: September 29		FILING DATE September 2	29. 2000			GROUP 2034				
				U.S. PATENT D				.1				
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE		ME	CLA	\SS	SUBC	LASS		DATE IF PRIATE	
ZR	AA	5,311,550	5-10-94	Fouch	e et al.		-					
	AB	4,630,287	12-16-86	Arms	trong		-		-			
	AC	4,271,527	6-2-81	Armstrong			<del></del>		-			
	AD	5,050,188	9-17-91	D	irr			·	_	<del></del>		
	AE 5,398,073 3-14-95				/ei			1				
	AF 5,452,015 9-19-95				alkar							
	AG	5,565,932	10-15-96	Gitta et al.								
	АН	5,481,412	1-2-96	Bannai et al.								
	Al 3,909,721 9-30-75				ng et al.							
		_		FOREIGN PATENT	DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY CLASS			\ss	SUBC	LASS	TRANS YES	LATION NO	
	AJ	0365431	4-25-90	Ε	Р	<u>-</u>	-				x	
	AK	0485105	5-13-92	Ε	Р					X		
	AL	92/14343	8-20-92	W	/O					X		
	АМ	89/08366	9-8-89	w	/O					X		
	AN	0031193	7-1-81	E	Р	<u>ال</u> 	·	1		х		
		отн	ER DOCUMENT(S	) (Including Autho	r, Title, Date, Pert	inent Pag	es, Etc.)					
AO Shinji Matsumoto et al., "200 Mb/s 16 QAM Digital Radio-Relay System Operating in 4 and 5 GHz B Japan Telecommunications Review, January 1982, vol. 24, no. 1, pages 65-73.								Bands",				
	АР	M. Pecot et al., Image Commun					Comp	atible Sy	ystem",	Signal Prod	cessing	
72	AQ Mitsuaki Oshima, "Constellation-Code Division Multiplex for Digital HDTV", IEEE, 1992, pages 1086-1092.											
EXAMINER		Amar	dase		DATE CONSIDER	RED		38.2	.02/			

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

,	r								· · · · · · · · · · · · · · · · · · ·				
Sheet	ORM PTO 1449 (modified)  ATTY DOCKET NO.  SERIAL NO.  NEW MARKET NO.												
FORM			MENT OF COMMER	<u>^</u>	ATTY DOCKET NO. 2000_1327		SERIAL NEW	NO.					
	PATEN	NT AND	TRADEMARK OFFI	CE	APPLICANT Mitsuaki OSHIMA et al.	<del></del>	<u> </u>		<u> </u>				
			sheets if necessary)	1141(3)	FILING DATE			GROUI	>				
	Date Submi	itted to	PTO: September 29	, 2000	September 29, 2000								
		<del></del>	<del></del>		U.S. PATENT DOCUMENTS			F	<del></del>				
	AMINER NITIAL		DOCUMENT NUMBER	DATE	NAME	CLA	ASS	SUBC	CLASS	FILING DATE IF APPROPRIATE			
A	2	AA	4,227,152	10-7-80	Godard et al.	1	7						
		АВ	4,525,846	6-25-85	Bremer et al.								
		AC	4,751,478	6-14-88	Yoshida								
		AD	4,891,806	1-2-90	Farias et al.								
		AE	4,903,125	2-20-90	Parker								
		AF	4,937,844	6-26-90	Kao								
!	:	AG	5,164,963	11-17-92	Lawrence et al.								
		АН	5,555,275	9-1996	Oshima								
		AI									·		
					FOREIGN PATENT DOCUMENTS		0 0 3						
			DOCUMENT NUMBER	DATE	COUNTRY CLASS			SUBC	CLASS	TRANSI YES	ATION NO		
		AJ	0311188	4-12-89	EP					х			
		AK	0329158	8-23-89	EP					х			
		AL	64-5135	1-10-89	JP					х			
		AM	63-28145	2-5-88	JP					x			
		AN	62-133842	6-17-87	JP	_		لـ		х			
			отн	ER DOCUMENT(S	(Including Author, Title, Date, Pe	rtinent Pag	es, Etc.)						
		AO	Tricia Hill et al., COM-31, June		nce Study of NLA 64-State pages 821-826.	QAM", I	EEE Tra	nsactio	ns on Co	ommunicati	ons, vol.		
	AP Hideki Ishio et al., "A Proposal of a Carrier Digital Transmission System Using Multi-Level APSK", pages 1-20.												
J	AS	ΑQ	Shanmugam, "[	Digital and Ana	alog Communication System	ns" 1979							
EXAMI	NER		Amai	dati	DATE CONSID	FRED	(	<u> </u>	1.02				

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1	<del></del>												
Sheet 3	3 of 6				T								
FORM I	PTO 1449 (n		TANK OF CONMINED	· • • • • • • • • • • • • • • • • • • •	ATTY DOCKET NO. 2000_1327		SERIAL NEW	. <b>NO.</b>		•			
	PATEN	NT AND	MENT OF COMMER TRADEMARK OFFICE SES CITED BY APPLICA	CE	APPLICANT Mitsuaki OSHIMA et al.	<del></del>							
	(Us	se several	I sheets if necessary)  PTO: September 29		FILING DATE September 29, 2000			GROU	P				
	<b>Jato Gas</b>	Tion to .	710. oopton	, 2000									
					U.S. PATENT DOCUMENTS	Τ		T		FILE 0 0 4 77 15			
	AMINER IITIAL	<u> </u>	DOCUMENT NUMBER	DATE	NAME	CL	ASS	SUBG	CLASS	FILING D			
A	<u>L</u>	AA	5,105,442	4-14-92	Wei	17	,		7				
		АВ	4,048,572	9-13-77	Dogliotti et al.	11							
		AC	5,282,019	1-25-94 Basile et al.					<				
	AD 5,311,547 5-10-94				Wei								
		AE	5,267,021	11-30-93	Ramchandran et al.								
		AF	5,038,219	8-6-91	Yamashita et al.	al.							
		AG	5,087,975	2-11-92	Citta et al.								
		АН	5,086,340	2-4-92	Citta et al.		<u> </u>						
		AI											
					FOREIGN PATENT DOCUMENTS								
			DOCUMENT NUMBER	DATE	COUNTRY	CLASS			CLASS	TRANSI YES	LATION NO		
		AJ	53-137657	12-1-78	JP					х			
		AK	0282298	9-14-88	Europe					х			
		AL	0392538	10-17-90	Europe					х			
		АМ	0490552	6-17-92	Europe					x			
		AN	0506400A2	9-30-92	Europe								
			отн	ER DOCUMENT(S	6) (Including Author, Title, Date, Pe	ertinent Paç	jes, Etc.)						
		AO	Khaled Fazel et 1081-1085	al., Combined	s multilevel coding and multi	iresolutio	n modu	ılation,	February	8, 1993, 1	Pages		
		AP	P. Hoeher et al., IEEE Global Tele - 2.1.7	, Performance ecommunication	of an RCPC-Coded OFDM-tons Conference "Globecom	based Die	gital Au scember	dio Bro r 2-5, 1	adcasting	g (DAB) Sy I. 1 of 3, P	stem, ages 2.1.1		
	AQ K. M. Uz et al., Combined multiresolution source coding and modulation for digital broadcast of HDTV*, 1992, Pages 283-292												
FXAMIN	200 m da le / 1 02/												

7	<del></del>						$\overline{}$						
Shee	t 4 of 6						)						
FORM	M PTO 1449 (		MENT OF COMMER	CE	ATTY DOCKET NO. 2000_1327		SERIAL NEW	NO.					
	PATE	NT AND	TRADEMARK OFFI	CE	APPLICANT Mitsuaki OSHIMA et al.								
	(U	se severai	sheets if necessary) PTO: September 29		FILING DATE September 29, 2000				GROUP				
	Date Subn	attou to	r 10. deptember 20	7, 2000	U.S. PATENT DOCUMENTS			L		-			
		T						T	201 400	FILING DATE IF			
	XAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	GL	A55	50	BCLASS	APPROPRIATE			
5	12	AA	5,142,353	8-25-92	Kageyama et al.	II							
		AB	5,197,061	3-23-93 Halbert-Lassalle et al.			· · · · · · ·						
	<u></u>	AC	5,291,289	3-1-94	Hulyalkar et al.								
5	V212	AD	5,166,924	11-24-92	Moose	1		_	<u></u>				
		AE											
		AF											
		AG											
	. AH												
		Al											
	· · · · · · · · · · · · · · · · · · ·	- <b>!</b>			FOREIGN PATENT DOCUMENTS	<u> </u>				•			
			DOCUMENT NUMBER	DATE	COUNTRY	CLASS SUBCLASS			BCLASS	TRANS YES	LATION NO		
×	1.D	AJ	0448492A1	9-25-91	Europe	1			1	~			
	1	AK	0485108A2	5-13-92	Europe					~			
		AL	0525641A2	2-3-93	Europe					~			
		AM	0540231A2	5-5-93	Europe					1			
		AN	0531046A2	3-10-93	Europe	I			_				
			отн	ER DOCUMENT(S	(Including Author, Title, Date, Pe	rtinent Pag	es, Etc.)						
	AO K. M. Uz et al., Multiresolution Source and Channel Coding for Digital Broadcast of HDTV, 1992, Pages 61-69.									ages 61-			
	AP Nambi Seshadri et al., Multi-Level Block Coded Modulations with Unequal Error Protection for the Rayleigh Fading Channel, Vol. 4, No. 3, May-June 1993, Pages 325-334.												
,	AQ William F. Schreiber, Spread-Spectrum Television Broadcasting, SMPTE Journal, August 1992, Pages 538-549.								ges 538-				
EXAN	AINFR		· A	mardo	DATE CONSID	ERED	9	.24.	02/				

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

·											
Sheet 5 of 6		· .	<u> </u>								
FORM PTO 1449 (n	nodified)			ATTY DOCKET 2000_1327	NO.		SERIAL NEW	NO.			
PATEN	IT AND	MENT OF COMMER TRADEMARK OFFI	CE	APPLICANT Mitsuaki OSI	HIMA et al.						
		ES CITED BY APPLICA sheets if necessary)	AN I (S)	FILING DATE				GROUP			
Date Subm	itted to	PTO: September 25	9, 2000	September 2	9, 2000						
			<u> </u>	U.S. PATENT D	OCUMENTS	·					
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NA	ME	CLA	\ss	SUBCLASS	FILING I APPROI		
	AA										
	AB										
	AC										
	AD										
	AE										
	AF				_					:	
	AG										
	АН										
	Al				V						
				FOREIGN PATENT	DOCUMENTS		·				
		DOCUMENT NUMBER	DATE		NTRY	CLA	\ss	SUBCLASS	TRANSI YES	ATION NO	
SP	AJ	85/04541	10-10-85	W	0						
	AK										
	AL										
	АМ										
	AN										
		ОТН	ER DOCUMENT(S	) (Including Autho	r, Title, Date, Per	tinent Pag	es, Etc.)				
IR	AO		ortin Vetterli et al., Multiresolution Coding Techniques for Digital Television: A Review, Multidimensional stems and Signal Processing, Volume 3, May 1992, Pages 161-187.								
	AP	Ezio Biglieri et a	lieri et al., Introduction to Trellis-Coded Modulation with Applications, April 6, 1992, Pages 173-207.								
ZZ	AQ	English Languaç	ge Abstract of	European Pate	ent No. 93 30	7575					
EXAMINER		Am	andale	/	DATE CONSIDE	RED	(	20.16.8c	/		

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

` ` ,		<del></del>									
Sheet 6 of 6											
FORM PTO 1449 (/				ATTY DOCKET 2000_1327	NO.	•	SERIAL NEW	NO.			
PATE	NT AND	MENT OF COMMER TRADEMARK OFFI SES CITED BY APPLICA	ICE	APPLICANT Mitsuaki OS	HIMA et al.		<u> </u>				-
(Us	se severa	I sheets if necessary) PTO: September 29		FILING DATE September 29, 2000							
Date Subil	inted to	FTO: September 2:	9, 2000	<u> </u>		· · · · · · · · · · · · · · · · · ·		<u> </u>			
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	U.S. PATENT D	ME	CL	ASS	SUE	CLASS	FILING I	DATE IF PRIATE
LAN	АА	4,636,876	1-13-87	Schv	vartz			-			
1	АВ	4,855,692	8-8-89	Kennar	d et al.						
	AC	4,873,701	10-10-89	Tre	tter						
	AD	4,958,360	9-18-90	Sa	ari						
	AE	5,115,453	5-19-92	Calderba	ank et al.						
2D	AF	5,168,509	12-1-92	Nakamu	ıra et al.	1	-	_			
	AG										
	АН		-								
	Al										
				FOREIGN PATENT	DOCUMENTS					•	
		DOCUMENT NUMBER	DATE	cou	COUNTRY CLASS			SUE	BCLASS	TRANSLATION YES NO	
SR	AJ	0122805	10-24-84	E	P		<u> </u>	-	Ĺ	х	
SD	AK	63-180280	7-25-88	J	Р					abstract	
	AL										
	AM										
	AN										
		ОТН	IER DOCUMENT(S	(Including Autho	r, Title, Date, Pe	rtinent Pag	es, Etc.)				
20	AO	Kazuhiko Nitadori, Synthesis of Multichannel Orthogonal VSB Signals by Quadrature Method, 1976 International Conference on Communications, June 14-16, 1976, Volume 1, Pages 3-25 - 3-29.									
	AP Thomas M. Cover, Broadcast Channels, IEEE Transactions on Information Theory, January 1972, Pages 2-14										
ZX	ΔQ	COM-26, No. 6	Optimum Weighted PCM for Speech Signals", Sundberg, IEEE Transactions on Communications, Volume OM-26, No. 6, June 1978, Pages 872-881.								
EXAMINER	1	Amer	date		DATE CONSID	ERED	08	2.24.	02/		

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 1 of 1						4		8#	
FORM PTO 1449 (n				ATTY DOCKET NO. 2000_1327		SERIAL 09/67		6.	
		MENT OF COMMER TRADEMARK OFFI		APPLICANT		<u> </u>		<del></del>	<u> </u>
		S CITED BY APPLICA sheets if necessary)	NT(S)	Mitsuaki OSHIMA et al.				·· - · · · <u>-</u>	
Date Subm	itted to I	PTO: September 28	, 2001	FILING DATE September 29, 2000		_	group 2614		
	r			U.S. PATENT DOCUMENTS	1			ı	
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLA	Ass .	SUBCLASS	FILING D	
OIPER	АА							-	
SEP 2 8 2001 E	AB						<b>.</b>		
	AC						NECE!		
MADE	AD					Techn	PECENTO 2 2010 POOR CONTRACTOR	ED	
	AE						Center		
	AF						<6	80	-
	AG		~ <del></del>						
	АН								
	Al						· · · · · · · · · · · · · · · · · · ·		
	, ,			FOREIGN PATENT DOCUMENTS				1	
		DOCUMENT NUMBER	DATE	COUNTRY	CL	ASS	SUBCLASS	TRANSI YES	ATION NO
200	LA	04-196822	7-16-92	Japan				abstract	
UR	AK	0 506 400	9-30-92	Europe		_		Х	
8	AL								
	АМ								
	AN			·					
	<u> </u>	отн	ER DOCUMENT(S	6) (Including Author, Title, Date, Pe	ertinent Pag	es, Etc.)		-	
	AO								
	AP							_	
	AQ								
EXAMINER		Aman	late	DATE CONSIL	DERED	8.5	પ્ર.૦૨/		

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 1 of 1		, .		(6	Bis		#7		
FORM PTO 1449 (n				ATTY DOCKET NO.	SERIAL	. No. 72,948			
PATE	DIA TV	MENT OF COMMER TRADEMARK OFFI	CE	APPLICANT Mitsuaki OSHIMAeet al.	1 2001				
		ES CITED BY APPLICATION  I sheets if necessary)	ANT(S)	FILING DATE		GROUP			
Date Su	bmitted	to PTO: April 11, 2	2001	September 29, 2000		2614			
	т		ı	U.S. PATENT DOCUMENTS	T .	7			
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS FILING DATE IF APPROPRIATE			
SI	AA	5,565,926	10-15-96	Bryan et al.					
	АВ		_						
	AC								
	AD					النشار المسترا	19 11 - 1 - 1		
	AE					RECE			
	AF					APR 1	•		
	AG				Technology (	enter 260'	U		
	АН								
	AI								
				FOREIGN PATENT DOCUMENTS					
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS		TRANSLATION YES NO	
Sex	LA	2-166979	6-27-90	Japan			abstract		
	AK								
	AL								
	AM								
	AN				<u> </u>				
	, ,	отн	ER DOCUMENT(S	(Including Author, Title, Date, Pe	rtinent Pages, Etc.)	· · · · · · · · · · · · · · · · · · ·			
	AO								
	АР								
	AQ				4				
EXAMINER		Ame	indate	DATE CONSID	ERED 8.	A.02			

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet	1 of 1		c.									
FORM	PTO 1449 (n		AENT OF COMMER	CE	ATTY DOCKET   2000_1327		,	serial 09/67	No. 2,948		TPE	
	PATE	DIA TI	MENT OF COMMER TRADEMARK OFFI	CE	APPLICANT Mitsuaki OSI	RE	CEI	<b>∀</b> EU		7	JAN n r a	C68.
	( <i>U</i> s	e several	ES CITED BY APPLICA sheets if necessary) o PTO: January 5,		FILING DATE	HIMA et al.			GROU		<del> </del>	10 E
	Date Sub	mitted t	orio. January 3,	2001	U.S. PATENT DO	9, 2000 chno	nogy Ce	SHIEL ZC	10201	·	TRAIL STRAIL	MR
	(AMINER NITIAL		DOCUMENT NUMBER	DATE	NA		CL	ASS	SUB	CLASS	SS FILING DATE IF APPROPRIATE	
A	S)	АА	5,243,629	9-7-93	w	ei			-			
		АВ						,				
		AC										
		AD										
		AE										
		AF										
		AG										
	АН											
		Ai										
					FOREIGN PATENT	DOCUMENTS						
			DOCUMENT NUMBER	DATE	cour	ITRY	CL	ASS	SUB	CLASS	TRANS YES	
×	12	AJ	64-74836	3-20-89	Jar	oan			Ī	_	abstract	
1		AK	53-108215	9-20-78	Jar	oan					abstract	
		AL	63-28145	2-5-88	Jar	oan					abstract	
`	<u> </u>	АМ	64-68144	3-14-89	Jar	oan					abstract	
ス	21	AN	5-218978	8-27-93	Jar	oan	4		<b>-</b>	<u></u>		х
			отн	ER DOCUMENT(S	(Including Autho	r, Title, Date, Per	tinent Pag	ges, Etc.)		*****		
		AO										
		AP										
		AQ										
												···
EXAM	INER		Amelho	94V		DATE CONSIDE	ERED	80	. 24.	<i>ο</i> Σ		

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.